

AMENDMENT A (IN RESPONSE TO PAPER NO. 7
(OFFICE ACTION DATED APRIL 7, 2003))

REMARKS

Claims 1-18 are pending in this case. In the amendment hereinabove, claim 8 has been amended. Based upon the following remarks, it is respectfully submitted that, in conformance with the foregoing amendment, these claims are allowable.

§102 Rejection of Claims 1-7 & 12-18

Claims 1-7 and 12-18 were rejected under 35 U.S.C. §102(e) as being anticipated by Scoggins, U.S. Patent No. 6,469,587 ("*Scoggins*"). This rejection is respectfully traversed and it is submitted that these claims, in conformance with the foregoing amendment, recite subject matter which is not anticipated by and is patentable over *Scoggins*.

In rejecting these claims, the Examiner cites Figures 2 and 5 of *Scoggins* along with a portion of the text at column 4, lines 25-47, in which "differential control voltage-to-voltage converter (CV2VC) 201" is discussed. It is respectfully submitted that such portions of *Scoggins* contain no teaching or suggestion which is in any manner anticipatory or suggestive of the presently claimed invention.

The Examiner cites elements 203 and 201 of *Scoggins* as corresponding to a "filter circuit". Element 203 of *Scoggins* appears only in phantom in Figure 2 and is only casually mentioned at column 4, lines 20, 27, 43 and 44, as being a loop filter and the source of a differential control voltage formed by input (to CV2VC 201) control voltages VCPI and VCNI, and a leakage current. Absolutely no teaching or suggestion appears concerning either any structure (e.g., series or shunt as per the discussion in the present specification at page 4, lines 28-31) or function of such a loop filter.

As for element 201, such element is expressly described as being a differential control voltage-to-voltage converter, i.e., it is not described or suggested as being a filter. While it is true that *Scoggins* does discuss a general bandwidth-limiting characteristic associated with CV2VC 201, such a discussion is not in the context of a filtering function. Such discussion merely notes that the components of CV2VC 201 are selected so as to not impart a broad

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operating bandwidth characteristic to the circuit. Indeed, as per the circuit schematic of CV2VC 201 in Figure 3 of *Scoggins*, not a single filter component is depicted or suggested, i.e., no capacitor or inductor appears. Hence, any bandwidth-limiting characteristic associated with CV2VC 201 will exist only because of the particular transistors used, and as is well known in the art, no reliable filter function (in terms of a predictable, specific frequency response) can be implemented without using specific, selected reactive components such as capacitors or inductors.

Hence, nothing about the disclosure of *Scoggins* as cited by the Examiner teaches or suggests the presently claimed invention in which “shunt filter circuitry, connected between [the] power supply and control terminals, ... filters [the] control voltage (emphasis added). In other words, the filter circuitry of the presently claimed invention is connected between the terminals responsible for conveying the power supply and control voltages, thereby

... maintaining the shunt connection of the loop filter 14, but making such shunt connection between the control voltage terminal 17 and the power supply VCC terminal instead of circuit ground GND. As a result, variations in the power supply voltage VCC will appear simultaneously at both the cathode and anode terminals of the diodes D1, D2. While such voltage variations will appear at the cathode terminals simply because they are connected directly to the power supply voltage VCC terminal, such voltage variations will also appear at the anode terminals since they are coupled through the capacitors C3, C4 of the loop filter 14. Hence, the applied tuning voltage across the diodes D1, D2 will remain constant, thereby eliminating first order dependency of the VCO output signal 13 frequency upon the power supply voltage VCC.

(See present specification at page 7, lines 9-18.)

The Examiner further identifies elements 203 and 201 of *Scoggins* as having “connections to Vcc”. First, nowhere in *Scoggins* is any connection to Vcc indicated for “loop filter 203”. Moreover, for a conventional lowpass loop filter used in a PLL, one would not provide a connection to the power supply terminal. See the discussion in the present specification at Figures 1-3 and page 4, line 18, through page 7, line 4. As for the connection to Vcc indicated for CV2VC 201, such connection is for providing the power needed to operate the active components (transistors and current sources) of CV2VC 201 and, as can be

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seen in the circuit schematic of Figure 3, is not provided in such a manner as to purposely pass variations in the power supply potential "downstream" as discussed hereinabove in the excerpt from page 7, lines 9-18, of the present disclosure. Indeed, as can be seen in the circuit schematic of Figure 3, variations in the power supply potential Vcc will effectively be isolated from the output signals VCPO, VCNO by the actions of the output transistors Q7, Q8.

Allowability of Claims 8-11

Claims 8-11 were objected to as being dependent upon a rejected base claim but were identified as being allowable if rewritten in independent form to include all limitations of the base claim and any intervening claims. In accordance therewith, claim 8 has been amended to be in independent form and to include all limitations of its base claim (claim 1) and any intervening claims (claim 7). Hence, it is submitted that claim 8 and its dependent claims 9-11 are in condition for allowance.

It is submitted that such amendment is a matter of form and not substance since such amended claim now merely includes expressly those limitations which were already included by virtue of such claim's dependency from originally filed claims 1 and 7.

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Conclusion

Claims 1-18 remain pending in this case. Based upon the foregoing amendment and remarks, it is respectfully submitted that these claims are allowable, and reconsideration and early allowance of these claims are requested.

Respectfully submitted,

WILDMAN, HARROLD, ALLEN & DIXON

Date: April 23, 2003 By: 
Mark A. Dalla Valle
Reg. No. 34,147

Attorneys for Assignee
225 W. Wacker Dr.
Chicago, IL 60606-1229
312-201-2000
Customer No.: 26,689